

# Contents

---

<b>Summary .....</b>	<b>s1</b>
Purpose .....	s3
Needs.....	s3
Poor System Linkage .....	s3
Safety Concerns.....	s5
Traffic Congestion.....	s5
Alternatives .....	s7
The No-Build Alternative .....	s12
Alternative 2B-2 .....	s12
Alternative 5A2B-2.....	s13
Alternative 5B2B-2 .....	s13
Identification of a Preferred Alternative .....	s14
Impacts to the Natural and Social Environment.....	s15
Estimated Construction Costs .....	s15
Areas of Controversy .....	s18
Issues to Be Resolved .....	s18
 <b>Exhibits.....</b>	 <b>ix</b>
 <b>Glossary .....</b>	 <b>xv</b>
 <b>Acronyms.....</b>	 <b>xxxix</b>

<b>Chapter 1 • Purpose and Need .....</b>	<b>1</b>
1.1 Study History .....	3
1.1.1 Opening of Interstate 395 .....	3
1.1.2 Maine East–West Highway Initiative .....	3
1.1.3 National Highway System .....	5
1.2 Study Purpose .....	5
1.3 Study Need .....	7
1.3.1 Poor System Linkage .....	7
1.3.2 Safety Concerns .....	9
1.3.3 Traffic Congestion .....	9
1.4 Other Actions .....	14
1.4.1 Calais–St. Stephen Area International Border Crossing .....	15
1.4.2 Weight Restrictions on the Interstate System .....	15
1.5 Federal and State Decisions and Actions .....	15
1.6 Scope of This Environmental Analysis .....	17
1.7 Applicable Regulations, Guidance, and Required Permits and Approvals .....	21
1.8 Remainder of This DEIS and Section 404 Permit Application Supporting Information .....	23
 <b>Chapter 2 • Alternatives Analysis .....</b>	 <b>25</b>
2.1 Maine Sensible Transportation Policy Act Analysis .....	25
2.1.1 Transportation Systems Management .....	27
2.1.2 Travel Demand Management .....	28
2.2 Alternatives Identification, Development, and Analysis Process .....	28
2.2.1 Initial Screening .....	30
2.2.2 Continued Development and Screening .....	34
2.2.2.1 Analysis of Connectors .....	36
2.2.2.2 Evaluation of Route 9 .....	40
2.2.2.3 Continued Coordination with the Federal Cooperating Agencies .....	41

2.2.2.4 Alternatives Retained for Further Consideration and Detailed Study .....	42
2.3 Range of Reasonable Alternatives Retained for Further Consideration .....	42
2.3.1 No-Build Alternative.....	42
2.3.2 Alternative 2B-2.....	45
2.3.3 Alternative 5A2B-2.....	49
2.3.4 Alternative 5B2B-2 .....	49
2.4 Other Activities Necessary to Construct the Preferred Alternative and Estimated Construction Cost .....	53
2.4.1 Property to Be Acquired for Each Build Alternative .....	53
2.4.2 Utilities to Be Relocated.....	54
2.4.3 Estimated Construction Costs.....	54
2.5 Next Steps If a Build Alternative Is to Be Constructed .....	56
2.6 Most Essential Differences among the Alternatives to Be Considered in Decision Making .....	57

## **Chapter 3 • Affected Environment and Environmental Consequences ..... 59**

3.1 Physical and Biological Environment.....	59
3.1.1 Physical Geography.....	60
3.1.1.1 Climate.....	60
3.1.1.2 Soils .....	61
3.1.1.3 Geology.....	64
3.1.2 Aquatic Resources .....	65
3.1.2.1 Water Resources.....	65
3.1.2.2 Aquatic Habitats and Fisheries .....	73
3.1.2.3 Floodplains .....	82
3.1.2.4 Wetlands .....	84
3.1.2.5 Wild and Scenic Rivers .....	91
3.1.3 Vegetation.....	92
3.1.4 Wildlife Habitats and Wildlife .....	94
3.1.4.1 Wildlife Habitat.....	94

# **I-395/Route 9 Transportation Study Environmental Impact Statement**

3.1.4.2 Regulated Wildlife Habitat and Significant Habitats Protected under the NRPA .....	102
3.1.5 Endangered, Threatened, and Other Protected Species .....	106
3.1.5.1 Federal Endangered and Threatened Species.....	107
3.1.5.2 State Endangered and Threatened Species .....	107
3.1.5.3 Other Protected Species.....	107
3.2 Atmospheric Environment .....	108
3.2.1 Climate Change .....	108
3.2.2 Air Quality.....	111
3.2.2.1 Mesoscale Assessment .....	112
3.2.2.2 Microscale Assessment .....	112
3.2.2.3 Mobile Source Air Toxics Analysis.....	112
3.2.2.4 PM <sub>2.5</sub> Hot-Spot Screening Analysis.....	114
3.2.3 Noise.....	114
3.3 Transportation Environment.....	125
3.3.1 Transportation Facilities and Systems .....	125
3.3.2 System Continuity and Mobility.....	129
3.3.3 Existing and Projected Demand.....	131
3.3.4 Crash Reductions .....	132
3.3.5 Mobility Benefits.....	134
3.4 Land Use and Cultural, Social, and Economic Environments .....	137
3.4.1 Land Use .....	137
3.4.1.1 Land Use and Land Cover .....	137
3.4.1.2 Relocations .....	138
3.4.1.3 Future Land Use and Zoning .....	140
3.4.1.4 Communities and Neighborhoods.....	144
3.4.1.5 Community Facilities and Services.....	144
3.4.1.6 Tribal Trust Lands .....	147
3.4.1.7 Farmlands, Prime and Unique Farmland Soils .....	148

3.4.2 Uncontrolled Petroleum and Potential Areas of Hazardous Wastes .....	148
3.4.3 Cultural Resources .....	149
3.4.3.1 Architectural Resources.....	149
3.4.3.2 Archaeological Resources.....	151
3.4.3.3 Traditional Cultural Properties.....	153
3.4.4 Public Parks and Recreation Lands.....	153
3.4.5 Social and Economic Environment.....	154
3.4.5.1 Population, Demographics, and Labor Force .....	154
3.4.5.2 Community Characteristics and Conditions.....	156
3.4.5.3 Employment and Industry Trends .....	158
3.4.5.4 Retail Businesses .....	160
3.4.6 Minority and Disadvantaged Populations.....	162
3.5 Relationship between Short-Term Uses of the Human Environment and Enhancement of Long-Term Productivity.....	163
3.6 Irreversible and Irretrievable Commitment of Resources .....	164
3.7 Indirect Impacts and Cumulative Impacts .....	165
3.7.1 Indirect Impacts.....	165
3.7.1.1 Induced Development or Growth .....	171
3.7.2 Cumulative Impacts .....	173
3.8 Mitigation and Commitments.....	180
3.8.1 Mitigation .....	181
3.8.2 Commitments .....	184
 <b>Chapter 4 • Coordination and Consultation.....</b>	 <b>187</b>
4.1 Scoping and Early Coordination.....	187
4.2 Federal and State Agency Interagency Coordination Meetings.....	194
4.3 Public Involvement .....	194
4.3.1 Public Advisory Committee.....	194

# **I-395/Route 9 Transportation Study Environmental Impact Statement**

4.3.2 Public Informational Meetings .....	195
4.3.3 Website.....	199
4.3.4 Public Information .....	199

## **Chapter 5 • List of Preparers ..... 201**

Federal Highway Administration.....	201
Maine Department of Transportation .....	202
Cooperating Agencies.....	203
U.S. Environmental Protection Agency.....	203
U.S. Fish & Wildlife Service .....	204
U.S. Army Corps of Engineers.....	204
Maine Historic Preservation Commission.....	204
Gannett Fleming, Inc. ....	205
A.K. Environmental .....	208
TechEdit Services.....	208
Elected Officials .....	209
U.S. Federal Government .....	209

## **Chapter 6 • Distribution List..... 209**

Tribal Government.....	212
Maine State Government.....	212
Local Government.....	214
Other Interested Parties.....	215
Libraries .....	215

## **Chapter 7 • References ..... 217**

## **Index ..... 231**

<b>Appendix A.....</b>	<b>235</b>
<b>Appendix B .....</b>	<b>237</b>
<b>Appendix C.....</b>	<b>239</b>
Initial Development .....	239
Continued Development and Screening .....	242
Analysis of Connectors .....	243
Evaluation of Route 9 .....	244
Continued Coordination with the Federal Cooperating Agencies.....	245
Alternatives Retained for Further Consideration and Detailed Study.....	245
<b>Appendix D.....</b>	<b>281</b>
<b>Appendix E .....</b>	<b>305</b>

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# Exhibits

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## Summary

S.1 – Location Map.....	s1
S.2 – Study Area.....	s2
S.3 – Existing and Future Traffic .....	s6
S.4 – DHV, v/c Ratio, LOS, and Average Travel Speed for Roadways Segments .....	s7
S.5 – Range of Alternatives Considered between 2001 and 2011 .....	s8
S.6 – Alternatives Retained for Further Consideration.....	s11
S.7 – Direct Impacts of Alternatives .....	s16
S.8 – Indirect Impacts of Alternatives .....	s17
S.9 – Cumulative Effects for the Build Alternatives.....	s18

## Chapter 1

1.1 – Location Map.....	1
1.2 – Study Area.....	2
1.3 – Proposed East–West Highway.....	4
1.4 – High-Priority Corridors.....	4
1.5 – High Crash Locations.....	10
1.6 – Existing and Future Traffic .....	11
1.7 – LOS Thresholds on Two-Lane Rural Highways.....	12
1.8 – DHV, v/c Ratio, Average Travel Speed, and LOS for Roadways Segments .....	13
1.9 – LOS Criteria for Signalized Intersections .....	14
1.10 – LOS Criteria for Individual Approaches to Unsignalized Intersections.....	14

# **I-395/Route 9 Transportation Study Environmental Impact Statement**

1.11 – Delay on Route 46 at the Intersection of Routes 46 and 9.....	14
1.12 – The NEPA Process .....	16
1.13 – Issues Identification and Tracking.....	19

## **Chapter 2**

2.1 – Range of Alternatives Considered between 2001 and 2011 .....	26
2.2 – Route 9 and 46 Intersection Traffic.....	27
2.3 – Alternatives Remaining after Initial Screening Process (June 2001) .....	33
2.4 – Alternatives Remaining after Continued Screening Process (June 2004) .....	35
2.5 – Alternatives and Connectors between the Three Westernmost Alternatives (December 2008).....	37
2.6 – Connectors Analyzed and Impacts to Select Features .....	38
2.7 – DHV, v/c Ratio, Average Travel Speed and LOS for Route 9 .....	41
2.8 – Alternatives Retained for Further Consideration.....	43
2.9 – Design Criteria .....	44
2.10 – Typical Section .....	45
2.11 – Alternative 2B-2 .....	46
2.12 – Interchange of Alternatives 2B-2 and 5B2B-2 and Route 1A.....	47
2.13 – Intersection of 2B-2, 5A2B-2, and 5B2B-2 with Route 9.....	48
2.14 – Alternative 5A2B-2 .....	50
2.15 – Interchange of Alternative 5A2B-2 with Route 1A .....	51
2.16 – Alternative 5B2B-2 .....	52
2.17 – Summary of Property to Be Acquired.....	54
2.18 – Direct Impacts of Alternatives .....	58

## **Chapter 3**

3.1 – Soils.....	62
3.2 – Impacts to Soils with Special Status (acres).....	63
3.3 – Surface Waters and Wetlands .....	66

3.4 – Maine Standards for Classification of Fresh Surface Waters.....	67
3.5 – Maine Standards for Classification of Lakes and Ponds .....	68
3.6 – Impacts to Streams.....	70
3.7 – Managed Species by Life-History Stage .....	78
3.8 – Vernal Pools and Herptiles in Vernal Pools in the Study Area .....	81
3.9 – Impacts to Vernal Pools .....	82
3.10 – Floodplains .....	83
3.11 – Impacts to Floodplains by Watershed (acres/percentage).....	84
3.12 – Wetlands by Watershed.....	86
3.13 – Impacts to Wetlands by Watershed (acres/percentage) .....	91
3.14 – Land Use and Land Cover .....	93
3.15 – Impacts to Vegetation (acres/percent) .....	94
3.16 – Undeveloped Habitat Blocks .....	96
3.17 – Undeveloped Habitat Block Sizes .....	97
3.18 – Habitat Types within Undeveloped Habitat Blocks .....	98
3.19 – Habitat Types and Sizes within Undeveloped Habitat Blocks (acres).....	99
3.20 – Area-Sensitive Forest and Grassland Birds Found in the Study Area.....	100
3.21 – Impacts to Undeveloped Habitat with Utility Easements as Fragmenting Features (acres).....	102
3.22 – Significant Habitat .....	104
3.23 – Impacts to State-Regulated Wildlife Habitat.....	105
3.24 – Impacts to Greenhouse Gas Emissions (MtCO <sub>2</sub> e) .....	110
3.25 – Noise-Sensitive Areas.....	115
3.26 – Noise Measurement Data.....	118
3.27 – Noise Abatement Criteria .....	119
3.28 – Summary of Predicted Noise Levels.....	120
3.29 – Summary of Noise Abatement .....	126
3.30 – Changes in Traffic Volumes.....	132
3.31 – Changes in DHV, v/c Ratio, Travel Speed, and LOS .....	133

## **I-395/Route 9 Transportation Study Environmental Impact Statement**

3.32 – Crash Estimates and 2035 Annual Costs.....	134
3.33 – Changes in VMT and Vehicle Operating Costs.....	135
3.34 – Changes in VHT and Vehicle Operating Costs .....	136
3.35 – Existing Land Use .....	137
3.36 – Impacts to Land Use (acres) .....	138
3.37 – Displacements .....	139
3.38 – Zoning .....	142
3.39 – Impacts to Land Use with Zoning Designations (acres) .....	143
3.40 – Community Facilities and Important Features.....	145
3.41 – Impacts to Neighborhoods.....	146
3.42 – Hazardous Waste Sites.....	150
3.43 – Archaeological Resources .....	152
3.44 – Population Growth .....	155
3.45 – Age Distribution .....	155
3.46 – Labor Force.....	156
3.47 – Educational Attainment.....	156
3.48 – Income Levels.....	156
3.49 – Population Below Poverty Level .....	157
3.50 – Housing Units by Type of Structure.....	157
3.51 – Employment by Industry.....	159
3.52 – Approximate Distances of Road-Effect Zones .....	166
3.53 – Indirect Impacts of Alternatives .....	167
3.54 – Potential Induced Development by Alternative within a Half- Mile of Interchanges and Intersections....	173
3.55 – Cumulative-Effects Study Area.....	175
3.56 – Cumulative Impacts.....	176

**Chapter 4**

4.1 – Summary of Scoping and Early Coordination Letters during Preparation of the EA.....189

4.2 – Summary of Scoping and Early Coordination Letters during Preparation of the EIS .....191

4.3 – Summary of Interagency Coordination Meetings and Results during Preparation of the EA.....195

4.4 – Summary of Interagency Coordination Meetings and Results during Preparation of the EIS .....196

4.5 – Summary of PAC Meetings during Preparation of the EA .....197

4.6 – Summary of PAC Meetings during Preparation of the EIS.....198

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# Glossary

**affected environment** – The physical features and land area(s) to be influenced or impacted by an alternative alignment under consideration. This term also includes various social and environmental factors and conditions pertinent to an area.

**agency coordination** – A general term referring to the process whereby government agencies are afforded an opportunity to review and comment on transportation proposals.

**alignment studies** – A general term describing engineering work involving the vertical and horizontal positioning, adjusting, and refining, as well as comprehensive evaluation of possible connectors through a selected study corridor and considering all relevant features, controls, travel desires, impacts, benefits, and costs. Alignment studies are typically performed to assess the relative feasibility of a proposed transportation facility.

**alternative** – One of a number of specific transportation-improvement proposals, alignments, options, design choices, and so forth in a defined study area. For a transportation project, alternatives to be studied typically include the No-Build Alternative, an upgrading of the existing roadway alternative, new transportation routes and locations, transportation systems management strategies, multimodal alternatives (if warranted), and any combinations of these.

**archaeologically sensitive surficial deposits** – Land forms that are likely locations of prehistoric settlements or gathering places, based on a Maine Historic Preservation Commission (MHPC) predictive model that uses surficial geology (i.e., water bodies, alluvium, lake-bottom deposits, glacial outwash, and eskers) to assess sensitivity.

**arterials** – Roads with high traffic volumes that provide linkage among major cities and towns and developed areas, capable of attracting travel over long distances. Basically, arterials provide service to interstate

and inter-county travel demand. The arterial system typically provides for high travel speeds and the longest trip movements. The degree of access control on an arterial may range from full control (i.e., freeways) to entrance control (e.g., on an urban arterial through a densely developed commercial area).

**at-grade** – The intersection of two roads, or a road and a railway, that cross at the same elevation.

**at-risk watershed** – Watersheds contributing to water bodies that are at risk of eutrophication due to new development and phosphorus-laden runoff. These water bodies include public drinking-water supplies and waters that currently exhibit algal blooms or other signs of eutrophication. At-risk watersheds are defined according to criteria in the State of Maine Stormwater Law (5 MRSA § 3331).

**attainment area** – A geographic area in which levels of a criteria air pollutant meet the health-based primary standard (i.e., National Ambient Air Quality Standard) for the pollutant. Attainment areas are defined using federal pollutant limits set by the U.S. Environmental Protection Agency.

**avoidance alternative** – A general term used to refer to any alignment proposal that has been developed,

modified, shifted, or downsized to specifically avoid impacting one or more resources.

**Beginning with Habitat Program** – A collaborative program of federal, state, and local agencies and nongovernmental organizations. It is a habitat-based approach to conserving wildlife and plant habitat on a landscape scale managed by the Maine Department of Inland Fisheries and Wildlife.

**Best Management Practices** – Structural and/or management practices employed before, during, and after construction to protect receiving-water quality. These practices provide techniques to either reduce soil erosion or remove sediment and pollutants from surface runoff.

**biodiversity** – The diversity of genes, species, and ecosystems. This term includes the entire hierarchy of ecological organization and encompasses regional ecosystem diversity (i.e., landscape diversity), local ecosystem diversity (i.e., community diversity), species diversity, and genetic diversity within populations of a species.

**carbon monoxide (CO)** – A colorless, odorless, tasteless gas formed in large part by incomplete combustion of fuel. Fuel-combustion activities (e.g.,



transportation, industrial processes, and space heating) are the major sources of CO.

**CEQ Regulations** – Directives issued by the Federal Council on Environmental Quality, published in 40 CFR 1500-1508, which governs the implementation of the National Environmental Policy Act and the development and issuance of environmental policy and procedure for federal actions by public agencies. The regulations contain definitions, spell out applicability and responsibilities, and mandate certain processes and procedures for state agencies with programs that utilize federal-aid funds.

**collector roads** – Roads characterized by a roughly even distribution of their access and mobility functions. These routes gather traffic from local roads and streets and deliver it to the arterial system. Traffic volumes and speeds are typically lower than those of arterials.

**comment period** – The duration of time during which written comments or responses may be submitted to an agency that has distributed a document for review and comment. It can be applicable to all types of documents that are circulated as well as to formal presentations, such as those that may be given by transportation-department officials at a public hearing.

**community water supply** – A public water system that serves at least 25 residents throughout the year; consists of one or multiple wells or reservoirs.

**conceptual design** – idea or feasibility phase of the design process during which various alternatives are developed and tested. During this phase, various environmental and engineering issues are identified and accounted for prior to advancing a range of alternatives into the preliminary and final design phases.

**conceptual mitigation** – The early, generalized identification of design, operational, construction, or other measures considered to avoid, minimize, or compensate for anticipated environmental consequences. Typically, conceptual mitigation represents ideas discussed before the concluding stages of an environmental study.

**concurrence** – Determination by an agency that information to date is adequate and a project can advance to the next stage of project development.

**connector** – A highway or roadway that connects to another highway or roadway.

**construction phase** – The phase of the transportation project development process that entails the physical

act of building by a contractor of the proposed project according to all plans and specifications developed during final design.

**controlled-access facility** – A highway where access to abutting properties is restricted or limited by control of the right-of-way.

**controlled-access highway** – A highway that provides limited points of vehicle access; access is permitted only at interchanges and intersections. Freeways, such as I-395, are controlled-access highways in which access points occur only at interchanges. These highways serve mobility needs and are designed to accommodate higher travel speeds.

**cooperating agency** – Any organization, other than the lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed action.

**cost effectiveness** – An economic measure used to evaluate and compare the corridors of a study. Cost effectiveness is defined as the present value of a gross regional product growth per dollar of construction cost. In this way, cost effectiveness compares the relative future economic benefits to the size of the investment required to generate those benefits.

**cumulative impacts** – Impacts on the environment that result from the incremental impact of a project when added to other past, present, and reasonably foreseeable future actions regardless of which agency or person undertakes other such actions; required under the National Environmental Policy Act (NEPA) by the Council on Environmental Quality (CEQ).

**daily traffic volume** – The number of vehicles that use a given roadway in both directions during a 24-hour period.

**dB** – Decibel, a unit of measurement of sound level. Expresses relative difference in power or intensity, usually between two acoustic or electric signals, equal to 10 times the common logarithm of the ratio of the two levels.

**dBA** – An abbreviation for A-weighted decibel. A decibel is a unit used to describe sound-pressure levels on a logarithmic scale. For a community noise-impact assessment, an A-weighted frequency filter is used to approximate the way humans hear sound.

**deciduous** – Refers to woody vegetation, such as oak or maple trees, that shed their leaves after the growing season.

**deer-wintering area** – Areas of softwood-dominated forest that provide food resources and shelter for deer during severe winter conditions.

**demand** – Vehicular traffic demand (i.e., volume) on a given highway segment, expressed in vehicles per day.

**demand shift** – The change in demand (i.e., volume) on a given highway segment, expressed in vehicles per day. Demand shifts can be caused by new corridors that provide a faster and/or shorter travel route.

**design hour volume (DHV)** – The hour used for geometric design of highways, typically the 30th highest traffic volume of the year.

**direct impacts** – The immediate effects on the social, economic, and physical environment caused by the construction and operation of a highway. These impacts are usually experienced within the right-of-way or in the immediate vicinity of the highway or another element of the proposed action.

**disadvantaged population** – A group of people, living in one area, that has a median income below the federal poverty level or that exhibits other indicators of economic disadvantage.

**displacement** – The act of removing businesses, people, or households from structures for transportation right-of-ways.

**Draft Environmental Impact Statement (DEIS)** – The document prepared by the Federal Highway Administration (FHWA) in accordance with FHWA National Environmental Policy Act regulations (23 CFR Part 771). These regulations require that the DEIS evaluate all reasonable alternatives considered; discuss the reasons that alternatives have been eliminated from detailed study; and summarize the studies, reviews, consultations, and coordination required by environmental laws and Executive Orders.

**early coordination** – Communication undertaken near the beginning of a transportation-study development process to exchange information and work cooperatively with agencies and the public in an effort to determine the type and scope of studies, level of analysis, and related study requirements.

**edge habitat** – An area along a transitional zone between two or more vegetation cover types that provide feeding, breeding, nesting, and/or cover habitat for wildlife.

## **I-395/Route 9 Transportation Study Environmental Impact Statement**

**endangered species** – Any species that is in danger of extinction throughout all or a significant portion of its range (in reference to the Endangered Species Act [16 USC Chapter 35 Section 3(6)] and the Maine Endangered Species Act).

**engineering** – A general term that refers to the systematic analysis and development of measurable physical data using applied mathematical, scientific, and technical principles to yield tangible end products that can be made, produced, and constructed.

**environment** – The complex of social, natural, and cultural conditions that are present in the physical surroundings.

**Environmental Assessment (EA)** – A document prepared for federal actions that are not categorical exclusions and that do not clearly require an Environmental Impact Statement (EIS). An EA provides the analysis and documentation to determine if an EIS or a Finding of No Significant Impact (FONSI) should be prepared.

**environmental baseline** – An inventory or summary assessment of environmental features present in a study area, typically conducted during systems planning or early project development. This activity is

used to provide environmental-impact information as a basis for developing alternatives.

**environmental feature** – A general term to denote resources or objects located in or adjacent to an existing or proposed transportation corridor. Features may include natural or physical resources, important structures, community facilities, topographic features, and certain other land uses.

**environmental justice** – Executive Order 12898 requires each federal agency to “make achieving environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health or environmental impacts on minority populations and low-income populations.”

**essential fish habitat (EFH)** – Those waters and substrate that are necessary to fish for spawning, breeding, feeding, or growing to maturity, as defined by the National Marine Fisheries Service and the regional Fishery Management Councils. EFH is protected by the Magnuson-Stevens Fishery Conservation and Management Act of 1996.

**Farmland Protection Policy Act (FPPA)** – A statute enacted in 1981 by the U.S. Department of Agriculture (USDA) to ensure that significant agricultural

lands are protected from conversion to nonagricultural uses. For highway projects receiving federal aid, the regulations promulgated under the FPPA (7 CFR Part 658, 1984) require a state highway authority (i.e., the MaineDOT) to coordinate with the USDA Natural Resources Conservation Service. The FPPA regulates four types of farmland soils: prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance.

**farmland soils** – Soils suited to producing crops; those with soil quality, growing season, and moisture supply needed to produce a sustainable yield when treated and managed using acceptable methods. Specifically, farmland soils are those soil types designated by the Natural Resources Conservation Service in accordance with the Farmland Protection Policy Act of 1981 by the U.S. Department of Agriculture.

**farmland soils of statewide importance** – Soils that are nearly prime farmland and that produce high yields of crops when treated and managed according to acceptable farming methods (see the definition for prime farmland soil).

**feasibility study** – A general term that refers to various types of systematic evaluations carried out to better assess the desirability or practicality of further

developing a proposed action. Such studies are typically performed during the planning stages.

**federal-aid system** – The federal-aid system consists of those routes in Maine that are eligible for the categorical federal highway funds.

**Federal Emergency Management Agency (FEMA)** – A former independent agency that became part of the new Department of Homeland Security in March 2003. It is tasked with responding to, planning for, recovering from, and mitigating against disasters.

**Federal Highway Administration (FHWA)** – The branch of the U.S. Department of Transportation responsible for administering the funding of federal-aid highway projects.

**Federal Register** – A daily publication of the U.S. Government Printing Office that contains notices, announcements, rulemaking, and other official pronouncements of the administrative agencies of the U.S. Government. Various announcements and findings related to specific environmental matters and transportation projects and activities appear in this publication.

**final design phase** – The phase of the transportation project development process that involves the preparation of detailed working drawings as well as specifications and estimates for approved transportation projects.

**Final Environmental Impact Statement (FEIS)** – The document prepared after circulation of a DEIS (or Supplemental DEIS) and consideration of comments received. The Federal Highway Administration National Environmental Policy Act regulations (23 CFR Part 771.125) require that the FEIS identify a preferred alternative, evaluate all reasonable alternatives considered, discuss and respond to substantive comments on the FEIS, summarize public involvement, and describe the mitigation measures that will be incorporated into the proposed action.

**Finding of No Significant Impact (FONSI)** – A document by a federal agency that briefly presents the reasons why an action, not otherwise excluded (§ 1508.4), will not have a significant effect on the human environment and, therefore, for which an environmental impact statement will not be prepared. It will include the environmental assessment or a summary of it and will note any other environmental documents related to it (§ 1501.7(a)(5)). If the assessment is included, the

finding need not repeat any of the discussion in the assessment but may incorporate it by reference.

**floodplain** – The level area adjoining a river channel that is inundated during periods of high flow.

**floodway** – The channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood may be carried without substantial increases in flood heights.

**fragmentation** – Subdivision of a forest or other habitat into isolated patches by roads, land-clearing, or other human or natural alterations of the landscape and accompanied by the loss of a certain portion of the original habitat.

**freeway** – A type of road designed for safer high-speed operation of motor vehicles through the elimination of at-grade intersections. This is accomplished by preventing access to and from adjacent properties and eliminating all cross traffic through the use of grade separations and interchanges.

**functional conflict** – Highways provide a balance between providing access (with multiple access points) and mobility (with controlled-access points). Freeways are designed to maximize mobility and serve

regional traffic demands as opposed to local roads (or collectors) that provide multiple access points to adjacent land uses (residences or businesses). Functional conflicts arise when regional traffic that would be better served on a freeway uses local roads.

**Geographic Information System (GIS)** – A computer-based application used to perform spatial analysis.

**geometric deficiency** – A deficiency that occurs when a highway's geometric characteristics (e.g., lane width, shoulder width, horizontal curvature, and vertical grade) do not meet prevailing design standards.

**geometric design** – Those engineering activities that involve standards and procedures for establishing the horizontal and vertical alignment and dimensions of a highway.

**glacial outwash** – Surficial sand and gravel sediments deposited ahead of a glacier by glacial meltwater.

**grade** – The slope of a road along the direction of travel, typically characterized by the vertical rise per unit of longitudinal distance.

**grade separation** – The intersection of two roads, or a road and a railway, that cross at different elevations.

One roadway overpasses or underpasses the other roadway with a structure(s).

**gross regional product (GRP)** – One of the major economic indices of the socioeconomic development of a region. GRP is equal to the total of added values in the regional economic industries, estimated as a difference between production and intermediate consumption.

**Groundwater Recharge Protection Areas** – Areas of land designated by water-resource agencies through which rainwater or snowmelt percolate and replenish the underlying aquifer near a public well. These areas require special protection because they directly affect the quality and safety of the public drinking-water supply.

**habitat block** – Units of habitat uninterrupted by roadways or other disturbances.

**high crash location (HCL)** – An intersection or highway segment that experiences an abnormally high number of crashes relative to the traffic demands that are served. For the state of Maine, the MaineDOT identifies HCLs.

**highway reconstruction/rehabilitation** – Reconstruction of an existing highway is undertaken when the pavement structure or alignment of the existing facility is deficient. Reconstruction includes removal and replacement of the entire pavement structure, significant changes in the vertical or horizontal alignment, or addition of lanes. Rehabilitation includes resurfacing and other minor repairs intended to extend the service life of the existing facility and enhance highway safety.

**historic resources** – Properties, structures, and districts that are listed in or have been determined to be eligible for listing on the National Register of Historic Places.

**hourly traffic volume** – The number of vehicles that use a given road during a 1-hour period.

**hydric soils** – Soils that are saturated, flooded, or ponded long enough during the growing season to develop at least temporary conditions in which there is no free oxygen in the soil around roots. Hydric soils correspond to federally and state-regulated wetlands in many circumstances.

**hydrologic regime** – The frequency and duration of inundation or soil saturation of a given area.

**impacts** – A term used to describe the positive or negative effects on the natural or human environment as a result of a specific project(s).

**impervious surface** – Relates to hydrology; a surface through which precipitation cannot penetrate, causing direct runoff or perching (e.g., asphalt paving, roofs, and densely compacted gravel).

**independent utility** – The ability of a transportation improvement to be a usable and reasonable expenditure even if no additional transportation improvements are made in the area.

**indirect effects (or secondary impacts)** – Effects caused by a given action occurring later in time or farther removed in distance but that are reasonably foreseeable (e.g., induced changes to land-use patterns, population density, and growth rate).

**Integrated Transportation Decision-Making (ITD) Process** – The requirements of Maine’s Sensible Transportation Policy Act and the National Environmental Policy Act have been integrated within a single ITD process to guide the planning of new transportation construction projects in the state.



**Intelligent Transportation Systems (ITS)** – The application of technology to goods and people movement to reduce delay and improve safety. The main applications of ITS in place today involve the monitoring of real-time traffic flows and weather conditions and then transmitting this information to the appropriate authorities and the motoring public. The authorities use this information to send response teams to the scene of an accident, whether it is an emergency medical team or a hazardous material team. The motoring public is alerted to potential hazards or delays on roadways through the use of highway advisory radio, variable message signs, or broadcast radio traffic reports.

**interagency meeting** – One of several scheduled gatherings held during the transportation project development process to present project studies and data to government agencies and to receive comments and responses to assist in further project development. Typically, these meetings are held to discuss data such as plans of study, project-need analyses, alternatives-analysis information, elimination and selection of alternatives, and environmental documents.

**Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)** – a United States federal law that posed a major change to transportation planning and policy,

as the first U.S. federal legislation on the subject in the post-Interstate Highway System era. It presented an overall intermodal approach to highway and transit funding with collaborative planning requirements, giving significant additional powers to metropolitan planning organizations. Signed into law on December 18, 1991 by President George H. W. Bush, it expired in 1997. It was followed by the Transportation Equity Act for the 21st Century (TEA-21) and most recently in 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

**interstate** – A freeway-type highway that is part of the National Highway System.

**Interstate Highway System** – The network of interstate highways established by the Federal-Aid Highway Act of 1956. The statute established a 41,000-mile network of controlled-access highways (expanded to 42,000 miles by legislation in 1968) intended to connect all metropolitan areas with populations of more than 50,000 and all state capitals.

**Labor Market Area (LMA)** – Regional areas with a high concentration of employment opportunities. These are economically integrated units within which

workers may readily change jobs without changing their place of residence.

**lacustrine** – Of and related to lakes.

**Land and Water Conservation Fund (LWCF)** – A system for funding federal, state, and local parks and conservation areas, created by the Land and Water Conservation Fund Act of 1964.

**lead agency** – The federal project proponent with primary responsibility for preparing an environmental document.

**Least Environmentally Damaging Practicable Alternative (LEDPA)** – This is identified by the U.S. Army Corps of Engineers in compliance with Section 404(b)(1) of the U.S. Clean Water Act. Critical to the selection of the LEDPA is the recognition of the full range of National Environmental Policy Act alternatives and impacts in determining which alternatives are (1) practicable, and (2) environmentally less damaging. The U.S. Army Corps of Engineers is the only federal agency that can permit the LEDPA.

**legal notice** – A formal announcement or finding published in a periodical or newspaper to provide

official public notice of an action or approval that is of public interest.

**level of detail** – A general term referring to the amount of data collected and the scale, scope, extent, and degree to which item-by-item particulars and refinements of specific points are necessary or desirable in carrying out a study. Level of detail is an important factor in the quality of a study, overall study costs, and length of time needed to perform study work.

**Level of Service (LOS)** – A qualitative measure describing operational conditions in a traffic stream and their perception by motorists and/or passengers. Six levels of service are defined and given letter designations from A to F, with LOS A representing the best operating conditions (i.e., very light, free-flowing traffic) and LOS F the worst (i.e., congested, stop-and-go traffic).

**link** – A new or existing highway segment between two defined end-points.

**local roads and streets** – All public roads and streets not classified as arterials or collectors have a local classification. Local roads and streets are characterized by many points of direct access to adjacent properties

and have a relatively minor role in accommodating mobility. Speeds and traffic volumes are usually low.

**logical termini** – Features such as cross-route locations that are considered rational end-points for a transportation improvement and that serve to make it useable.

**Magnuson-Stevens Fishery Conservation and Management Act** – Legislation (16 USC 1855(b)) governing all fisheries resources within 320 kilometers (200 miles) of the U.S. coast that established regional Fishery Management Councils and required the preparation of Fisheries Management Plans.

**MaineDOT Highway Design Guide** – A tool developed by the MaineDOT that provides guidance for the design of roads and highways in the State of Maine in addition to the Federal Highway Administration design criteria.

**Maine Sensible Transportation Policy Act (STPA)** – A state law enacted in 1991 by the citizens of Maine that provides a decision-making framework for examining a range of alternatives. The STPA is applicable to transportation-planning, capital-investment, and project-selection decisions made by the MaineDOT.

**major collector road** – Collector roads that tend to serve higher traffic volumes than other collector roads. Major collector roads typically link arterials. Traffic volumes and speeds are typically lower than those of principal arterials.

**mesoscale air-quality analysis** – A regional-level analysis of air for chemical constituents.

**microscale air-quality analysis** – An analysis of air for chemical constituents, typically conducted for a small study area such as an intersection.

**minor arterial** – Highways that tend to link collector roads to principal arterials and serve lower traffic volumes than typical arterials. Minor arterials are typically designed at lower travel speeds than principal arterials.

**mitigation** – Actions that avoid, minimize, or compensate for potential adverse impacts.

**mitigation measures** – Specific design, commitment, or compensation made during the environmental evaluation and study process that serve to moderate or lessen impacts from a proposed action. In accordance with CEQ Regulations, mitigation includes

avoidance, minimization, rectification, reduction, and compensation.

**National Ambient Air Quality Standards (NAAQS)**

– The prescribed level of pollutants in the outside air that cannot be exceeded during a specified time in a specified geographic area.

**National Environmental Policy Act (NEPA) of 1969, as amended** – Federal legislation that requires an interdisciplinary approach in planning and decision making for federal-aid actions. The Act includes requirements for the contents of Environmental Impact Statements that are to accompany every recommendation for major federal actions significantly affecting the quality of the human environment. The interdisciplinary study approach includes analysis of potential impacts to the natural, social, and economic environments.

**National Highway System (NHS)** – A system of those highways determined to have the greatest national importance to transportation, commerce, and defense in the United States. It consists of the Interstate Highway System and logical additions to it, selected other principal arterials, and other facilities that meet the requirements of one of the NHS subsystems.

**National Historic District** – An area consisting of numerous buildings and their setting and identified as historic on the National Register of Historic Places.

**National Priority List (NPL)** – The “Superfund” statute (42 USC Section 9601) requires the U.S. Environmental Protection Agency to establish a NPL of sites that are to be given top-priority consideration for removal of hazardous substances and remedial action.

**National Register of Historic Places (NRHP)** – the official list of the Nation’s historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service’s National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America’s historic and archeological resources.

**National Wetlands Inventory (NWI)** – A program administered by the U.S. Fish & Wildlife Service for mapping and classifying wetlands resources in the United States.

**Natural Resources Conservation Service (NRCS)** – Formerly the Soil Conservation Service, NRCS is a department in the U.S. Department of Agriculture responsible for conserving all natural resources on

private lands and administering the Farmland Protection Policy Act.

**needs analysis** – Data collection and analysis to document the purpose and need for a project. This document may draw on any number of transportation, master-planning, socioeconomic, traffic, safety, system-linkage, growth-management, or other community or regional issues of importance.

**new location highway** – A highway proposed to be constructed on land not currently used for transportation facilities.

**nitrogen oxides (NO<sub>x</sub>)** – Nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>) are collectively referred to as nitrogen oxides (NO<sub>x</sub>). NO forms during the high-temperature combustion process. NO<sub>2</sub> forms when NO further reacts in the atmosphere. NO<sub>x</sub> reacts with sunlight to form ozone, a colorless gas associated with smog or haze conditions. Ozone is a pollutant regulated by the Clean Air Act Amendments of 1990.

**No-Build Alternative** – Typically includes short-term, minor restoration types of activities (e.g., safety and maintenance improvements) that maintain the continuing operation of an existing facility. The No-Build

Alternative serves as a baseline for the comparison of other alternatives.

**noise abatement criteria (NAC)** – Noise levels measured in decibels that are used as a basis of comparison for evaluating the impact from predicted design-year noise and for determining whether noise-abatement measures should be considered.

**noise abatement measures** – Actions that reduce traffic-noise impacts. Noise-abatement measures can be traffic-management measures, alteration of horizontal and vertical alignments, acquisition of property rights for construction of noise barriers, construction of noise barriers, acquisition of real property or interest for buffer zones, or noise insulation of public-use or nonprofit institutional structures.

**noise receptor** – Locations that may be affected by noise. Sensitive receptors include residences, parks, schools, churches, libraries, hotels, and other public buildings.

**non-community drinking water system** – A public water system that serves at least 25 people at least 60 days of the year and is not a community or seasonal water system.

**non-point source pollution (NPS)** – Pollution of water bodies that does not originate at a single specific source, such as an industrial discharge or discharge from a wastewater treatment plant. Sources of NPS include runoff from highways, agricultural fields, golf courses, and lawns.

**other principal arterials** – Highways that provide access between arterials and a major port, airport, public-transportation facility, or other intermodal-transportation facility. Other principal arterials tend to serve lower traffic demands than principal arterials.

**Outstanding River Segment (ORS)** – A section of a river or stream designated by the Maine Natural Resources Protection Act (12 MRSA § 403) for protection because of the special resource values of its flowing waters and shorelines.

**ozone** – A gas that is a variety of oxygen. Ozone is a pollutant regulated by the Clean Air Act Amendments of 1990. Ground-level ozone is the main component of smog. Ozone is not directly emitted by motor vehicles but rather is formed when oxides of nitrogen react with sunlight.

**palustrine** – The group of vegetated wetlands traditionally called by names such as marsh, swamp, bog,

fen, and prairie. Palustrine wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes.

**palustrine emergent wetlands (PEM)** – A palustrine wetlands dominated by herbaceous species, typically cattails, sedges, and grasses, and commonly referred to as a marsh.

**palustrine forested wetlands (PFO)** – A palustrine wetlands dominated by trees, commonly referred to as a swamp.

**palustrine scrub-shrub wetlands (PSS)** – A palustrine wetlands dominated by shrubs.

**peak hour** – The hour of the day when traffic volume on a given roadway is highest. A separate peak hour can be defined for morning and evening periods.

**peak-hour Leq** – Represents the noisiest hour of the day/night and usually occurs during peak periods of motor-vehicle traffic. The Leq is the equivalent sound-level measurement, which means it averages background and short-term transient sound levels and provides a uniform method for comparing sound levels that vary over time.

**peak-hour volume** – The traffic volume that occurs during the peak hour, expressed in vehicles per hour. Peak-hour volumes are typically 10 to 15 percent of daily volumes.

**permit** – Written permission given by a governmental agency to take certain action during specific steps of a transportation project development process. Permits may include permission for any construction, excavation, depositing of material, or other work in navigable waters (U.S. Corps of Engineers); permission required for the discharge of dredged or fill material into waters of the United States (U.S. Corps of Engineers); and permission to construct bridges, causeways, and drawbridges in navigable waters (U.S. Coast Guard). A permit also may refer certain other clearances or certifications, such as clearance from the Federal Aviation Administration for proposed highway construction in the vicinity of public-use and military airports, and water-quality certifications for the licensing of an action that would result in a discharge into regulated waters. These approvals, as well as certain others relating to solid-waste management, underground storage tanks, coastal zone areas, and so forth, involve approvals and documentation commonly referred to as permits.

**plan of study** – A detailed, item-by-item outline of the objectives, scope, methodology, and schedules for the analysis and development of a specific transportation project.

**posted speed limit** – The speed posted for a facility based on engineering and traffic investigations.

**preliminary engineering** – A general term to describe early phases of technical studies undertaken to determine all relevant aspects of transportation location, to identify feasible route alternatives or design options, and to assess various cost and benefit parameters before advancing the project into more detailed final design.

**prime farmland soil** – Soil map units that are designated by the Natural Resources Conservation Service as having the properties needed to produce sustained high-yield crops when managed with modern farming techniques.

**principal arterials** – Highways in rural and urban areas that connect urban areas, international border crossings, major ports, airports, public-transportation facilities, or other intermodal-transportation facilities.

**project development** – The overall process of advancing a transportation project from concept to implementation. Project development typically encompasses environmental and engineering tasks including planning, location, preliminary design, final design, and construction.

**public hearing** – A meeting designed to afford the public the fullest opportunity to express opinions on a transportation project. A verbatim record (i.e., transcript) of the proceedings is made part of the project record.

**public involvement** – Activities that present information to the public, seek public comments, and serve to ensure consideration of public opinion.

**public meeting** – An announced meeting conducted by transportation officials designed to facilitate participation in the decision-making process and to assist the public in gaining an informed view of a proposed project at any level of the transportation project development process. Such a gathering may be referred to as a public information meeting.

**rare and exemplary natural community** – An assemblage of interacting plants and animals and their common environment, recurring across the landscape,

in which the effects of recent human interference are minimal. Rare natural communities are those that occur infrequently. Exemplary natural communities are exceptional representatives of more common natural communities.

**RCRA generator** – An entity that produces hazardous waste regulated under the Resource Conservation and Recovery Act (RCRA) (42 USC Section 6901), which mandates the appropriate identification, tracking, and disposal of hazardous waste.

**Record of Decision (ROD)** – The document, prepared by the Federal Highway Administration, that presents the basis for the federal-agency action, summarizes any mitigation measures to be incorporated, and documents any required Section 4(f) approvals. No federal-agency action may be undertaken until a ROD has been signed. A ROD is prepared no sooner than 30 days after the public release of the Final EIS (FEIS).

**relocations** – The displacement of a residence, business, or other structure from a property owner, for public use, that requires the residents or business to be moved to an alternate location.



**REMI Model** – The Regional Economic Models, Inc., is a widely used and accepted econometric model maintained and updated by the Center for Business and Economic Research at the University of Southern Maine.

**right-of-way** – Land acquired by purchase, gift, or eminent domain to build and maintain a public road, bridge, railroad, or public utility.

**riparian** – An area of land that is adjacent to a stream or other water body.

**riverine** – Of and relating to rivers.

**rural** – A rural community is defined as an area with a population of fewer than 2,500 people or a population between 2,500 and 6,000 people and a worker-to-resident-worker ratio less than 1.0.

**safety deficiency** – In the context of this study, a safety deficiency is a highway segment or intersection that contains a high crash location.

**Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 USC Section 303) (Section 4(f))** – Legislation protecting publicly owned parks, public recreation areas, historic properties, or wildlife and

waterfowl refuges. The statute states that no Department of Transportation project may use land from these areas unless it has been demonstrated that there is to be no prudent and feasible alternative to using the land and that the project includes all possible planning to minimize harm resulting from the use.

**Section 6(f) of the Land and Water Conservation Fund Act of 1963 (Section 6(f))** – Legislation that provides for the public purchase and preservation of tracts of land.

**Section 10 of the Rivers and Harbors Act of 1899 (Section 10)** – Legislation (33 USC Section 403) that resulted in a permit being required from the U.S. Army Corps of Engineers (USACE) for projects requiring construction in or over navigable waters, the excavation from or dredging or disposal of materials in such waters, or any obstruction or alteration in a navigable water (e.g., stream channelization).

**Section 106 of the National Historic Preservation Act (Section 106)** – The National Historic Preservation Act of 1966 (16 USC 470f), Section 106, requires federal agencies to consider the effect of their undertakings on properties included in or eligible for inclusion on the National Register of Historic Places and to

afford the Advisory Council on Historic Preservation the opportunity to comment on such undertakings.

### **Section 404 of the Clean Water Act (Section 404)**

– The Federal Water Pollution Control Act Amendments of 1972 (33 USC 401 et seq.) is the legislation for protection of waters of the United States by the USACE and the U.S. Environmental Protection Agency. In accordance with Section 404 of the Clean Water Act, a permit is required from the USACE for projects requiring discharge of dredged or fill material into waters of the United States.

**shrub** – A woody plant of relatively low height, having several stems arising from the base and lacking a single trunk.

**sight distance** – The distance that a driver can see along the roadway before curvature or obstructions block the view.

**significant impacts** – Any number of social, environmental, or economic effects or influences that may occur as a result of the implementation of a transportation improvement. “Significant impacts” may include effects that are direct, secondary, or cumulative. The term *significant* is used to measure both context and intensity and interpreted by the Federal Highway

Administration in determining that type of National Environmental Policy Act document is appropriate. Categorical exclusions are those actions that do not involve significant effects. In most cases, Environmental Impact Statement projects can and do involve significant impacts.

### **significant wildlife habitat** – as defined by Maine Law

– Wildlife habitats, including deer-wintering yards, waterfowl and wading-bird habitat, seabird-nesting habitat, and significant vernal pools, that are protected under the State of Maine’s 38 MRSA § 480-B.

**State Implementation Plan (SIP)** – A plan created under the 1990 Clean Air Act Amendments that establishes emission-reduction requirements for ozone and carbon-monoxide nonattainment areas. Proposed projects must demonstrate that the impacts of emissions are consistent with the appropriate SIP.

### **Stormwater Pollution Prevention Plan (SWPPP)** –

A plan required for major construction projects under the U.S. Environmental Protection Agency National Pollutant Discharge and Elimination System general permit for construction activities. The SWPPP is required to address measures to prevent erosion, sedimentation, and other potential discharges of pollutants to water bodies and wetlands.

**stormwater runoff** – The portion of precipitation that flows toward stream channels, lakes, or other water bodies as surface flow.

**study area** – An identified expanse of land or topography selected and defined at the outset of engineering or environmental evaluations that is sufficiently adequate in size to fully identify, analyze, and document impacts and effects for proposed projects within its boundaries.

**study need** – A detailed explanation of the specific transportation problems or deficiencies that have generated the search for improvements. It refers to technical information, as necessary, such as measures of traffic efficiency or demand (e.g., origin–destination patterns, modal links, queue lengths, motorist delays, and level of service) and other goals (e.g., economic development, safety improvement, and legislative directives). Much of this information should be generated by the transportation planning process at an early stage. The explanation of need should be a problem-statement discussion, not a solution-oriented discussion.

**study purpose** – A broad statement of the overall intended objective to be achieved by a proposed transportation facility. Typically, the purpose can be

defined in a few sentences. For instance, it may address expanded capacity in a given transportation corridor to facilitate the safe and efficient movement of people and goods or improved access to a given area or community.

**Supplemental Draft Environmental Impact Statement (SDEIS)** – The document prepared by the Federal Highway Administration (FHWA) in accordance with FHWA National Environmental Policy Act regulations (23 CFR Part 771.130). A DEIS will be supplemented when the FHWA determines that (1) changes to the proposed action would result in significant impacts not evaluated in the DEIS, or (2) new information or circumstances relevant to environmental concerns and bearings on the proposed action or its impacts would result in significant environmental impacts not evaluated in the DEIS. An SDEIS document generally presents new and updated information with regard to changes in the study and environment that have occurred since the publication of a DEIS.

**Surface-water supply watershed** – The watershed that contributes to a public drinking-water supply.

**system compatibility** – Describes how well alternatives, either new highways or upgrades, fit into an

existing highway network and the transportation-improvement plan.

**system continuity** – Defined by how often highways transition between wide, higher-speed segments to narrow, lower-speed segments.

**system linkage** – A planning concept that refers to the interconnecting of roadways that comprise an overall transportation network. A discussion about how a proposed project fits into an existing and future transportation system (i.e., network) and how it contributes to developing a sound transportation network in an area or region is termed *system linkage*. In describing this concept, the terms *connector road*, *missing link*, *gap completion*, and *circumferential link* are sometimes used.

**system planning** – A methodical approach to the formulation of plans and programs for safe, efficient, and balanced transportation networks. The process includes the setting of goals and objectives; the collection of data of existing conditions; the simulation of future activities; the formulation of alternative planned changes; the evaluation of the changes against the desired goals and objectives; and the decisions about recommendations that are feasible, desirable, and appropriate.

**threatened species** – Any species that is likely to become an endangered species in the foreseeable future throughout all or a significant portion of its range (in reference to the Endangered Species Act [16 U.S.C. Chapter 35 Section 3(20)] and the Maine Endangered Species Act).

**Traditional Cultural Property (TCP)** – A property or site that is eligible for inclusion on the National Register of Historic Places because of its association with cultural practices or beliefs of a living community that are rooted in that community's history and are important to maintaining the continuing cultural identity of the community.

**transportation deficiencies** – A highway-related facility that is unable to safely and efficiently satisfy travel demands because of the intensity of traffic volumes, capacity, and/or safety.

**Transportation Demand Management (TDM)** – A system of actions whose purpose is to alleviate traffic problems through improved management of vehicle trip demand as opposed to adding new highway segments.

**transportation project development process** – An interactive, multiphase series of activities typically

spanning a period of years that involves comprehensive planning, prioritization, detailed engineering and environmental studies, and agency and public involvement that lead to the selection, design, and construction of identified transportation improvements.

**Transportation Systems Management (TSM)** – Relatively low-cost measures to increase capacity and/or provide safety improvements on an existing transportation system. These measures typically include traffic-signal timing or phasing adjustments, designation of turning lanes at specific intersections or driveways, access-management improvements, and enhanced signage or markings.

**unfragmented habitat block** – An undeveloped area that is not impacted by roads, vegetation clearing, or development.

**upgrade** – A geometric improvement to an existing highway segment.

**urban** – An urban community is defined as an area with a population of more than 7,500 people or a population between 2,500 and 7,500 people and a worker-to-resident-worker ratio greater than 1.0.

**U.S. Army Corps of Engineers (USACE)** – A federal agency that administers Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Its regulatory programs address wetlands and waterways protection.

**U.S. Department of Agriculture (USDA)** – A federal agency responsible for administering programs that address farming issues.

**U.S. Environmental Protection Agency (USEPA)** – A federal agency responsible for administering programs that address environmental issues.

**U.S. Fish & Wildlife Service (USFWS)** – A federal agency responsible for addressing the protection of fish and wildlife including rare, threatened, or endangered species. The USFWS has an advisory role in the Section 404 regulatory program administered by the U.S. Army Corps of Engineers.

**vegetation cover type** – A biological community characterized by certain vegetation characteristics, such as hardwood forest, mixed forest, shrub, herbaceous, and urban or residential managed vegetation.

**vehicle-hours traveled (VHT)** – A measure of automobile use and trip time. One vehicle traveling 1 hour constitutes 1 vehicle-hour.

**vehicle-miles traveled (VMT)** – A measure of automobile use and trip length. One vehicle traveling 1 mile constitutes 1 vehicle-mile.

**vernal pool** – A temporary pool of surface water that provides breeding habitat for certain amphibian and invertebrate species.

**volatile organic compounds (VOCs)** – Colorless gaseous compounds originating, in part, from the evaporation and incomplete combustion of fuels. In the presence of sunlight, VOCs react to form ozone, a pollutant regulated by the Clean Air Act Amendments.

**waterfowl and wading bird habitat (WWH)** – Wetlands that provide habitat for waterfowl (i.e., geese, brant, and ducks) and wading birds (i.e., heron, egrets, bitterns, and rails) and meet certain criteria for size, quality, and percentage of open water as established by the Maine Department of Inland Fisheries and Wildlife regulations.

**watershed** – A region or area that contains all land ultimately draining to a water course, body of water, or aquifer.

**wellhead protection area (WPA)** – Areas of land in which human activities are regulated to protect the quality of groundwater that supplies public drinking-water wells.

**wetlands** – Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support – and that under typical circumstances do support – a prevalence of vegetation typically adapted for life in saturated soil conditions.

**wild and scenic river** – A river or river segment designated by the National Park Service because of the outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values (16 USC 1271-1287).

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# Acronyms

<b>AADT</b>	Average annual daily traffic	<b>DPS</b>	Distinct population segment
<b>AASHTO</b>	American Association of State Highway and Transportation Officials	<b>EA</b>	Environmental assessment
<b>ac.</b>	Acre	<b>EFH</b>	Essential fish habitat
<b>ACHP</b>	Advisory Council on Historic Preservation	<b>EIS</b>	Environmental impact statement
<b>ADT</b>	Average daily traffic	<b>EO</b>	Executive order
<b>APE</b>	Area of potential effect	<b>ESA</b>	Endangered Species Act (U.S.)
<b>BACTS</b>	Bangor Area Comprehensive Transportation System	<b>FEMA</b>	Federal Emergency Management Agency
<b>BMP</b>	Best management practices	<b>FHWA</b>	Federal Highway Administration
<b>BCWP</b>	Biennial Capital Work Plan	<b>FEIS</b>	Final environmental impact statement
<b>CAA</b>	Clean Air Act	<b>FONSI</b>	Finding of no significant impact
<b>CEQ</b>	Council on Environmental Quality	<b>FPPA</b>	Farmland Protection Policy Act (U.S.)
<b>CFR</b>	Code of Federal Regulations	<b>GAP</b>	Gap Analysis Program (Maine)
<b>CO</b>	Carbon monoxide	<b>GOM</b>	Gulf of Maine
<b>CRF</b>	Critical Rate Factor	<b>gpm</b>	Gallons per minute
<b>CWA</b>	Clean Water Act (U.S.)	<b>HAPC</b>	Habitat area of particular concern
<b>cy</b>	Cubic yards	<b>HCL</b>	High crash location
<b>CZMA</b>	Coastal Zone Management Act	<b>ISTEA</b>	Intermodal Surface Transportation Efficiency Act of 1991
<b>dBA</b>	Decibels using an A-weighted frequency filter	<b>ITS</b>	Intelligent transportation systems
<b>DEIS</b>	Draft environmental impact statement	<b>IWWH</b>	Inland waterfowl and wading bird habitat
<b>DHV</b>	Design hour volume	<b>LAWCON</b>	Land and Water Conservation Fund Act of 1965

## **I-395/Route 9 Transportation Study Environmental Impact Statement**

<b>LEDPA</b>	Least environmentally damaging practicable alternative	<b>NMFS</b>	National Marine Fisheries Service
<b>Leq(h)</b>	One-hour equivalent sound level	<b>NNEPRA</b>	Northern New England Passenger Rail Authority
<b>LMA</b>	Labor market area	<b>NOAA</b>	National Oceanographic and Atmospheric Administration
<b>LOS</b>	Level of service	<b>NOI</b>	Notice of intent
<b>MaineDOT</b>	Maine Department of Transportation	<b>NOx</b>	Nitrogen Oxide
<b>MASC</b>	Maine Atlantic Salmon Commission	<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>MASCP</b>	Maine Atlantic Salmon Conservation Plan	<b>NRCS</b>	Natural Resources Conservation Service
<b>MCP</b>	Maine Coastal Program	<b>NRHP</b>	National Register of Historic Places
<b>MDEP</b>	Maine Department of Environmental Protection	<b>NRPA</b>	Natural Resources Protection Act
<b>MDIFW</b>	Maine Department of Inland Fisheries and Wildlife	<b>NSA</b>	Noise sensitive area
<b>MDMR</b>	Maine Department of Marine Resources	<b>NWI</b>	National Wetlands Inventory
<b>MDOC</b>	Maine Department of Conservation	<b>PAC</b>	Public Advisory Committee
<b>MGS</b>	Maine Geological Survey	<b>Pb</b>	Lead
<b>MHPC</b>	Maine Historic Preservation Commission	<b>PEM</b>	Palustrine emergent wetlands
<b>mi.</b>	Mile	<b>PFO</b>	Palustrine forested wetlands
<b>MNAP</b>	Maine Natural Areas Program	<b>PM</b>	Particulate matter
<b>MOA</b>	Memorandum of agreement	<b>ppm</b>	Parts per million
<b>mph</b>	Miles per hour	<b>ppt</b>	Parts per thousand
<b>MRSA</b>	Maine Revised Statutes Annotated	<b>PSS</b>	Palustrine scrub-shrub wetlands
<b>MSAT</b>	Mobile source air toxics	<b>ROD</b>	Record of decision
<b>NAAQS</b>	National Ambient Air Quality Standards	<b>SADT</b>	Summer average daily traffic
<b>NCHRP</b>	National Cooperative Highway Research Program	<b>SHPO</b>	State Historic Preservation Officer
<b>NAC</b>	Noise abatement criteria	<b>SO2</b>	Sulfur dioxide
<b>NEPA</b>	National Environmental Policy Act	<b>SPO</b>	State Planning Office
<b>NHPA</b>	National Historic Preservation Act	<b>STPA</b>	Maine Sensible Transportation Policy Act
<b>NHS</b>	National Highway System	<b>TDM</b>	Travel demand management



<b>TNM</b>	Traffic Noise Model
<b>TSM</b>	Transportation systems management
<b>TSS</b>	Total suspended solids
<b>TWWH</b>	Tidal waterfowl and wading-bird habitats
<b>USACE</b>	U.S. Army Corps of Engineers
<b>USDA</b>	U.S. Department of Agriculture
<b>USDOT</b>	U.S. Department of Transportation
<b>USEPA</b>	U.S. Environmental Protection Agency
<b>USFWS</b>	U.S. Fish and Wildlife Service
<b>USGS</b>	U.S. Geological Survey
<b>UST</b>	Underground storage tank
<b>v/c</b>	Volume to capacity ratio
<b>VOCs</b>	Volatile organic compounds
<b>VHT</b>	Vehicle hours traveled
<b>VMT</b>	Vehicle miles traveled
<b>vpd</b>	Vehicles Per Day
<b>vph</b>	Vehicles per hour
<b>YOY</b>	Young of the year

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